

REMARKS/ARGUMENTS

A Request for Continued Examination (RCE) under 37 CFR 1.114 is submitted herewith. This paper constitutes a submission under 37 CFR 1.114(c). Reconsideration of the rejections set forth in the Final Office Action mailed August 14, 2006 is respectfully requested. A Request for a Three-Month Extension of Time under 37 CFR 1.136(a) is submitted herewith, along with the fee prescribed by 37 CFR 1.17(a)(3). The response is therefore timely.

Claims 1-8 and 10 were examined, claims 11-25 having been cancelled without prejudice to the resubmission of the subject matter of these claims in a divisional application.

Claims 1, 5-7 and 10 stand rejected under 35 U.S.C. §103(a) as unpatentable over US Patent No. 4,916,775 – Gallant in view of US 6,099,400 – Ragnarsson et al. and in view of US 4,111,798 – Petersen et al. (“Peterson et al. ‘798”). Claims 2-4 were rejected on the same grounds as unpatentable over Ragnarsson et al. in view of Petersen et al. and in further view of US 5,112,269 to Petersen, deceased, et al. Claim 8 was rejected on the same grounds as unpatentable over Gallant as modified by Ragnarsson et al, and Peterson et al, and further in view of U.S. Patent No. 3,818,818 to Hice. For the reasons discussed below, these rejections are respectfully traversed.

The present invention, as defined, for example, in claim 1, is a method of separating the meat of egg-bearing shrimps from the shells and eggs of the shrimps, comprising the steps of (a) steam boiling the shrimps at a high pressure exceeding the atmospheric pressure, and at an elevated temperature exceeding the boiling temperature of water at the atmospheric pressure (i.e., “pressure cooking” the shrimp with super-heated steam); b) rapidly cooling the shrimps; c) peeling the cooled shrimps by mechanically opening the shells of the shrimps; d) separating the shrimp meat from the “remains” (shell parts and eggs that remain attached to the meat after peeling) in a flotation separation step in which the shrimp meat and the attached remains are introduced into a brine solution, including 6-14% NaCl by weight, for causing the meat to float on the brine solution while allowing the shell parts and eggs to sink; and e) removing the meat from the brine solution.

In framing the above-noted rejections, Gallant was cited for its disclosure of a method and apparatus for shucking and eviscerating clams and other “bivalvular mollusks” (column 1, lines 6-15), which includes the immersion of the shucked clam meat in a brine separator, in which the meat is separated from any remaining shells and fines. The brine separator causes the meat to float and the shells to sink. The Gallant method and apparatus is disclosed for use with mollusks, which do not contain eggs. Mollusk eggs are dispelled into the water for external fertilization, and the mollusks (particularly clams), when harvested, do not contain eggs. Crustaceans, such as shrimp, by contrast, typically carry eggs on the body of the females, and these eggs must be removed from the meat along with the shells.

Claim 1 specifically relates to a method of separating shrimp meat from both the shells and the eggs that are frequently carried on the shrimp. Gallant does not address this problem. As mentioned above, Gallant deals only with bivalvular mollusks, which do not contain eggs, and there is nothing in Gallant that suggests that it can be used to separate eggs from egg-bearing crustaceans, such as shrimp. The Examiner, nevertheless, contends that the Gallant method would inherently be “capable of operating on shrimp having eggs attached.” (Office Action of 8/14/06, p. 3.) In support of this contention, the Examiner states that the apparatus of Fig. 1 of Gallant can be used on “shellfish of the size of shrimp,” and then concludes that the shrimp eggs can somehow be “removed from the meat” using this apparatus. *Id.* It is respectfully submitted that it is not the size of the organism that matters (both shrimp and clams come in wide ranges of size), but it is rather the very different physical natures and characteristics of clams, on the one hand, and shrimps, on the other, that makes the Gallant method and apparatus unsuitable for removing both eggs and shells from shrimp meat. It is therefore respectfully submitted that the Examiner’s conclusion that the Gallant apparatus could be used to perform Applicant’s claimed method lacks any “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” MPEP 2112.

Moreover, the initial shell separation step in Gallant is to crush the whole clams after they are steamed, and then to agitate the mixture of crushed shells and meat to separate the meat from the crushed shell bits. See column 2, lines 44-55. There is no suggestion in Gallant of mechanically peeling a shell from the meat, as defined in Applicant’s claimed invention. This difference is, again, dictated by the substantial differences between shrimp shells (which must be

peeled) and clam shells (which cannot be peeled). There is no suggestion, in either Gallant or any of the secondary references, that Gallant may be adapted to peel a shell off a crustacean, as specified in Applicant's claimed invention. The Examiner's conclusion that it may be so adapted is therefore respectfully submitted to be unsupported by the teachings of the art or any other technical basis. In short, there is nothing in any of the cited art of record to suggest that the Gallant's apparatus may be modified by using peeling instead of crushing/agitating, because peeling would not work with clams or other mollusks. Thus, the modification of Gallant suggested by the Examiner would render Gallant unworkable for its intended purpose.

Furthermore, Claim 1 specifically recites the use of a brine solution having 6-14% NaCl by weight. This range is critical, because less than about 6% NaCl will not result in sufficient meat separation, particularly from the eggs (which are denser than the boiled shrimp meat), while more than about 14% will affect the flavor of the meat. The advantages of the specific salt concentration range are set forth in the specification at page 4, line 16, to page 5, line 2, and at page 13, lines 20-28 (the latter citation discussing the specific concentration of 9.5% by weight, which is nearly at the middle of the claimed range).

The Examiner has cited Peterson et al. '798 for its disclosure of a material separation device that can be used in the fishing/shellfish industry that, in a specific example (column 15, lines 1-20), uses a brine solution with 11% NaCl by weight. This specific example, however, is used to separate "defective" potatoes from "sound" potatoes, and there is nothing in the reference to suggest (1) that the specified 11% brine solution can or should be used to separate shrimp meat from shrimp shells and eggs; (2) that this (or any other) brine concentration is at all critical to the functioning of the disclosed device; or (3) that the specified 11% brine solution will work at all without the introduction of solid beads into the brine to alter its density (which is not needed in Applicant's claimed invention). Thus, there is nothing in the references to suggest combining the teaching of Peterson et al. '798 with those of Gallant and Ragnarsson in the manner suggested by the Examiner.


Accordingly, it is respectfully submitted that claim 1 defines patentably over the art of record and should be allowed. Claims 2-8 and 10 depend from claim 1 and further define other novel aspects of the invention that are neither taught nor suggested in the claimed combination of steps by the art of record. Thus, for example, claim 3 teaches a novel and non-obvious cooking temperature range; claim 4 teaches a novel and non-obvious cooking time period; claims 6 and 7

define the cooking step as being a continuous operation and a batch operation, respectively; and claim 10 defines the novel and non-obvious flotation separation step with greater particularity. The remaining dependent claims (2, 5, and 8) define with greater particularity specific aspects of the novel and non-obvious method defined in claim 1. Therefore, dependent claims 2-8 and 10 also define patentably over the art of record and should be allowed along with claim 1.

In summary, it is respectfully submitted that claims 1-8 and 10 define patentably over the art of record and should be allowed. Passage of the application to issue is therefore earnestly solicited.

Respectfully submitted,

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